



DOC19/991851

14 November 2019

Ms Belinda Scott
Transport Assessments
Department of Planning, Industry and Environment
GPO Box 39,
Sydney NSW 2001

Dear Ms Scott

**Botany Rail Duplication (SSI 9714)
Advice on the Environmental Impact Statement**

I am writing to you in reply to the invitation to the Environment Protection Authority (EPA) to provide advice on the Environmental Impact Statement (EIS), including recommendations for Conditions of Approval, for the above proposal.

The EPA understands that the project involves construction of a new track within the rail corridor over a distance of approximately 3 kilometres; track realignment and upgrading; four new rail crossovers; new bridge structures at Mill Stream, Southern Cross Drive, O'Riordan Street and Robey Street adjacent to existing bridges at these locations, and reconstruction of existing bridge structures at Robey Street and O'Riordan Street; construction of new embankment and retaining structures adjacent to Qantas Drive between Robey Street and O'Riordan Street, and a new embankment between Mill Stream and Botany Road bridges; and ancillary work such as bi-directional signalling upgrades, drainage works, utility relocation, and construction compounds and site access.

The EPA has reviewed the EIS provided by the Department of Planning, Industry and Environment (DPIE) and provides the following comments with regards to noise and vibration, water quality, air quality and contaminated lands:

1. Noise

The EPA reviewed the *Noise and Vibration Technical Report – Construction and Operation* (Technical Report 2 of the EIS) – herein referred to as NIA (noise impact assessment).

The EPA notes that the community will hear, and likely be affected by noise and vibration at different times during the construction of the project, and from changes in the operation of the rail line in the area once the project is operational. The EPA wishes to emphasise:

- The acoustic environment is likely to experience audible construction noise and vibration particularly during the evening and at night.
- It will be important to keep the community informed about construction activities as the project progresses, and to seek input to identify the community's preference to mitigation, including work scheduling, and consideration of respite periods.

The EPA has identified additional and specific requirements for the noise and vibration impact assessment as detailed below.

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Modelling

- Note 1 to Table 30 and Note 2 to Table 31 in the NIA indicate that corrections to the model to account for track features were taken from the *ARTC Noise Modelling and Mitigation Guideline*. This Guideline, or the assumptions under which calculations have been undertaken is not included in the assessment. **The *ARTC Noise Modelling and Mitigation Guideline* should be published alongside the assessment or the key calculation assumptions stated.**
- The NIA states that the project would increase train speeds to up to 45 km/h, yet the EIS states in Section 6.9.1 that the design speed is 50 km/hr. **The NIA should indicate if trains travelling at the design speed (50 km/hr) are likely to change the predicted operational impacts.**
- The NIA does not include a discussion around braking locations and horn noise, in accordance with the *Rail Infrastructure Noise Guideline*, EPA 2013. **The use of horns and the impact from braking should be incorporated into the model where applicable.**

Validation Procedure

- a) Section 4.4.3 of the NIA contains information regarding the validation of the noise model used to determine the noise impact of the proposed rail duplication. However, Section 4.5 “Operational Vibration” does not contain a model validation method. As the rail line is currently in operation, the usual obstacles to validate vibration levels would not apply in this instance. **The EPA requests that a rail vibration validation take place that is of similar detail to that undertaken for noise validation.**

Construction Method and Mitigation Options

- The assessment of worst case construction noise impacts in Section 5.1 “Overview of Construction Impacts on Residential Receivers” provides information relating to the worst case construction moving down the rail corridor. The report states that as the worst case scenario moves away from a receiver, those dwellings will receive noise levels that are less than worst case. However, no indication is given as to the extent and duration of the impact as the worst case construction scenario approaches and then travels past each NCA. **The EPA requires additional information of the extent of non-worst case construction noise at receivers considered to be above the “noise affected” level for the project.**
- Due to the significant out of hours (OOH) impacts expected at all NCAs, insufficient detail has been provided to determine the duration, regularity and scope of the exceedances during OOH works at the most affected receiver locations. The NIA states that a detailed assessment will be undertaken during detailed design and mitigation measures will then be reviewed and determined. **The EPA requires a detailed assessment to consider all feasible and reasonable mitigation, preferably developed in consultation with affected receivers, and including options for alternative accommodation where there are residual noise impacts.**
- The EPA notes that the current rail line will continue to be operational 24/7 and maintenance works will still occur during construction of the duplicated track. **The EPA considers that the Construction Noise and Vibration Management Plan (CNVMP) will need to consider operation and maintenance works in managing impacts during construction.**

Operational Noise Assessment Method and Mitigation

- The NIA states that operational mitigation, including the potential for barriers and at-receiver treatments, will be determined further during detailed design. **The EPA considers that feasible and reasonable mitigation for operation should be installed early where possible, to maximise the noise benefit during construction.**
- The NIA states “*The ONVR [Operational Noise and Vibration Review] will be prepared with reference to the ARTC Noise Prediction and Mitigation Guideline (ARTC, 2018).*” This Guideline is not included in the assessment. **The *ARTC Noise Prediction and Mitigation Guideline* should be published along with the ONVR.**

Recommended conditions of approval for noise:

C1 Construction activities associated with SSI 9714 must only be undertaken during the following standard construction hours:

- (a) between the hours of 7:00am and 6:00pm Monday to Friday;
- (b) between the hours of 8:00am and 6:00pm Saturday; and
- (c) at no time on Sundays or Public Holidays.

C2 Any high noise impact works and activities must only be undertaken:

- (a) between 8:00 am and 6:00 pm Monday to Friday;
- (b) between 8:00 am and 1:00 pm Saturday; and
- (c) in continuous blocks of no more than 3 hours, with at least a 1 hour respite between each block of work generating high noise impact, where the location of the works and activities is likely to impact the same noise sensitive receivers; except as expressly permitted by another condition of this licence.

For the purposes of this condition, 'continuous' includes any period during which there is less than a 1 hour respite between ceasing and recommencing any of the work that is the subject of this condition.

C3 Notwithstanding condition **C1**, construction works associated with the project may be undertaken outside the hours specified under **C1** conditions where the following are satisfied:

- (a) construction works that cause LAeq (15 minute) noise levels that are
 - i. no more than 5 dB(A) above rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), and
 - ii. no more than the noise management levels specified in Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses, and
 - iii. continuous or impulsive vibration values, measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.2 of *Assessing vibration: a technical guideline* (DEC, 2006), and
 - iv. intermittent vibration values measured at the most affected residence are no more than those for human exposure to vibration, specified in Table 2.4 of *Assessing vibration: a technical guideline* (DEC, 2006); or
- (b) where a negotiated agreement has been reached with affected receivers, where the prescribed noise and/or vibration levels cannot be achieved;
- (c) for the delivery of materials required by the police or other authorities for safety reasons; or
- (d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or
- (e) to ensure public and construction worker safety;
- (f) where works involve the need for a road occupancy licence and the relevant authority will not grant a licence for standards hours or the works involve utility service adjustments and the relevant utility provider requires the works to be undertaken outside of standard construction hours;
- (g) the relevant utility service operator has advised in writing that carrying out the works and activities during the hours specified in Condition **C1** would result in a high risk to the operation and integrity of the utility networks.

C4 Prior to the commencement of any construction works, an appropriately qualified person must prepare a detailed **Construction Noise and Vibration Management Plan (CNVMP)** based on detailed project design that includes, but is not necessarily limited to:

- (a) Identification of each work area, site compound and access route (both private and public).
- (b) Identification of the specific activities that will be carried out and associated noise sources at the premises and access routes.
- (c) Identification of all potentially affected sensitive receivers using the construction noise objectives identified in accordance with the *Interim Construction Noise Guideline* (DECC 2009), vibration

objectives as identified in accordance with the document *Assessing Vibration: A Technical Guideline* (DEC 2006), and the road traffic noise objectives as identified in accordance with the *NSW Road Noise Policy* (DECCW 2011).

- (d) Identification of non-project related construction activities in the area that may be undertaken concurrently or contiguously with the project and may have the potential for cumulative noise impacts on sensitive receiver locations.
- (e) Assessment of noise and vibration from the construction methods (including noise from construction traffic) against the objectives identified in (c) above.
- (f) Where the noise objectives are predicted to be exceeded, an analysis of feasible and reasonable noise mitigation measures be implemented to minimise construction noise and vibration.
- (g) Description of management methods and procedures and specific noise mitigation measures that will be implemented to control noise and vibration during construction, including the early erection of operational noise where they may be effective in mitigating construction noise, and means to coordinate with construction activities identified under (d) above to reduce impacts on the community.
- (h) Procedures to engage with and notifying residents of construction and vibration activities that are likely to affect their noise and vibration amenity.
- (i) Procedures to assess and manage noise impacts associated with essential out of standard hours works performed in accordance with C1.
- (j) Measures to monitor noise performance and respond to complaints.

2. Air Quality

The *Air Quality Impact Assessment* (Technical Report 3 of the EIS) included the assessment for the construction and operational phases of the project.

The operational assessment modelled combustion emissions (NO₂, CO, HC, SO₂, PM₁₀ and PM_{2.5}). Four different modelling scenarios were included, and they were used to account for present and future operational conditions. Modelling results predict no exceedances of the corresponding EPA impact assessment criteria. The assessment did not identify any other significant emission sources or risks to air quality, including odour.

The EPA's review of the assessment concludes that significant air quality impacts are unlikely to result from either the construction or operation phases of the project.

Recommended conditions of approval for air quality

- 1. The proponent is required to nominate and commit to adopt best practice locomotive emission performance.
- 2. The proponent is required to develop and implement a construction and operation **Air Quality Management Plan (AQMP)** that includes but is not limited to all reasonable and feasible mitigation measures presented in the Air Quality Impact Assessment.

As a minimum, the AQMP must include the following parts:

- (a) Key performance indicator(s);
- (b) Monitoring method(s);
- (c) Location, frequency and duration of monitoring;
- (d) Record keeping;
- (e) Response mechanisms;
- (f) Compliance reporting; and
- (g) Improvement plan

3. Water Quality

The EPA reviewed the *Surface Water Impact Assessment* (Technical Report 8 of the EIS) as well as the *Groundwater Impact Assessment* (Technical Report 7). The EPA notes the reports indicate a low risk to waterways based on proposed construction techniques, with no sediment basins and no discharge to water proposed during construction, and that erosion and sediment controls would be consistent with *Managing Urban Stormwater, Soils and Construction, Vol 1* (Landcom, 2004).

The construction methodology has been designed to avoid groundwater impacts, however, in the event groundwater is encountered, it would be collected and disposed off-site. The reports also indicate that if the contractor deems that discharge is necessary, then the proponent would prepare a discharge impact assessment, consistent with section 45 of the *Protection of the Environment Operations Act 1997* (POEO Act). The EPA can be contacted regarding the assessment requirements for this.

4. Contaminated Lands

The EPA has reviewed the *Contamination Assessment* (Technical Report 5 of the EIS) and based on the contamination reported, the EPA considers that the following management plans are required to be provided as part of the proponent's Response to Submissions (RtS).

- I. Asbestos Management Plan
- II. Acid Sulphates Soils Management Plan
- III. Remediation Action Plan
- IV. Unexpected Finds Protocol (The protocol should include detailed procedure for identifying and dealing with unexpected contamination, asbestos and other unexpected finds. The proponent should ensure that the procedure includes details of who will be responsible for implementing the unexpected finds procedure and the roles and responsibilities of all parties involved.)

To manage PFAS on site, the following must be considered and included as part of the Remediation Action Plan:

- a) Consideration and justification should be given for how the remediation option was chosen in accordance with the hierarchy for PFAS treatment and remediation options listed in the *PFAS National Environmental Management Plan* (PFAS NEMP, 2018).
- b) As stated in the PFAS NEMP, a key factor when choosing a remedial option is to reduce or eliminate pathways for migration of PFAS contamination. If onsite containment is the chosen option, the effectiveness must be demonstrated, showing consideration has been given to the design criteria and engineering requirements able to contain PFAS impacted material and leaching, and show evidence of the effectiveness of the remedial option.
- c) The proponent must demonstrate consideration for potential risks based on relevant criteria in the PFAS NEMP, as well as how the proposed remediation works will influence and contain leaching and migration of PFAS to groundwater and surface waters.
- d) The proponent must demonstrate that determination of what areas need to be remediated are based on appropriate and justified site-specific criteria.
- e) A comprehensive onsite environmental management plan must be developed outlining ongoing monitoring and management.

Recommended conditions of approval for contamination:

1. The proponent must prepare a Construction Soil and Water Management Plan.
2. The proponent must engage an EPA accredited site auditor to prepare a section B site audit statement that confirms that the remediation action plan is appropriate for the site and that the site can be made suitable for the proposed use.

3. The proponent must adhere to the management measures accepted by the Auditor.
4. The processes outlined in *State Environmental Planning Policy 55 - Remediation of Land (SEPP55)* be followed in order to assess the suitability of the land and any remediation required in relation to the proposed use.
5. The proponent must ensure the proposed development does not result in a change of risk in relation to any pre-existing contamination on the site so as to result in significant contamination [note that this would render the proponent the 'person responsible' for the contamination under section 6(2) of the *Contaminated Land Management Act 1997*].
6. The EPA is to be notified under section 60 of the *Contaminated Land Management Act 1997* for any contamination identified which meets the triggers in the *Guidelines for the Duty to Report Contamination*
(www.epa.nsw.gov.au/resources/clm/150164-report-land-contamination-guidelines.pdf)
7. The EPA recommends the use of "certified consultants". Please note that the EPA's *Contaminated Land Consultant Certification Policy*, Version 2, November 2017, (<http://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/clm/18520-contaminated-land-consultant-certification-policy.pdf?la=en>) supports the development and implementation of nationally consistent certification schemes in Australia, and encourages the use of certified consultants by the community and industry. Note that the EPA requires all reports submitted to the EPA to comply with the requirements of the *Contaminated Land Management Act 1997* to be prepared, or reviewed and approved, by a certified consultant.

5. Waste

The consent conditions should ensure that the development complies with standard requirements regarding waste management.

Should you require clarification of any of the above please contact Anna Timbrell on 9274 6345 or email anna.timbrell@epa.nsw.gov.au.

Yours sincerely



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